

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica St. Louis

13715 Rider Trail North

Earth City, MO 63045

Tel: (314)298-8566

TestAmerica Job ID: 160-5405-1

Client Project/Site: Glen Isle, Radiological Analyses

Revision: 1

For:

Posillico Dev Company at Harbor Isle LLC
1750 New Highway
Farmingdale, New York 11735

Attn: Ellis Koch

Rhonda Ridenhower

Authorized for release by:

3/14/2014 4:27:17 PM

Rhonda Ridenhower, Manager of Project Management
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Job ID: 160-5405-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Posillico Dev Company at Harbor Isle LLC

Project: Glen Isle, Radiological Analyses

Report Number: 160-5405-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

Revision 1- Reprocessed the method blank for gamma spec calibration (level II data only)

RECEIPT

The samples were received on 02/04/2014; the samples arrived in good condition, properly preserved. The temperatures of the 2 coolers at receipt time were 20.2° C and 20.2° C. Additional analysis not listed on the COC were performed at client request.

RADIUM 226 (0 DAY INGROWTH)-Waters

Samples LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), FB014 (160-5405-5), FB015 (160-5405-6) and LT-R-003-GW (160-5405-7) were analyzed for radium 226 (0 day ingrowth) in accordance with EPA 903. The samples were prepared on 02/06/2014 and analyzed on 02/11/2014 and 02/12/2014.

The samples were analyzed with no ingrowth, as such; the sample results may be biased high.

Sample LT-R-002-GW (160-5405-4) was reduced to 500 mL because of a high amount of fine, orange sediment within the sample.

No other difficulties were encountered during the Radium 226 analysis.

Case Narrative

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Job ID: 160-5405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

All other quality control parameters were within the acceptance limits.

RADIUM-228 (GFPC)-Waters

Samples LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), FB014 (160-5405-5), FB015 (160-5405-6) and LT-R-003-GW (160-5405-7) were analyzed for Radium-228 (GFPC) in accordance with EPA 904. The samples were prepared on 02/05/2014 and analyzed on 02/10/2014.

Sample LT-R-002-GW (160-5405-4) was reduced to 500 mL because of a high amount of fine, orange sediment within the sample.

No difficulties were encountered during the Radium-228 analysis.

All quality control parameters were within the acceptance limits.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)-Waters

Samples LT-R-001-0-5 (160-5405-1) and LT-R-001-5-10 (160-5405-2) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE A01R_Th. The samples were dried on 02/05/2014, prepared on 02/12/2014 and analyzed on 02/19/2014.

Sample 160-5405-4 was reduced from 500mL to 100mL due to the sample being orange in color. Sample 160-5405-7 was reduced from 500mL to 250mL due to the sample being brown in color. Possible matrix interference. Samples also required the use of multiple syringe filters when loading onto column cartridges. LT-R-002-GW (160-5405-4), LT-R-003-GW (160-5405-7)

No difficulties were encountered during the Isotopic Thorium analysis.

All quality control parameters were within the acceptance limits.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)-Solids

Samples LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), FB014 (160-5405-5), FB015 (160-5405-6) and LT-R-003-GW (160-5405-7) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 02/12/2014 and analyzed on 02/17/2014 and 02/18/2014.

No difficulties were encountered during the Isotopic Thorium analysis.

All quality control parameters were within the acceptance limits.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)-Waters

Samples LT-R-001-0-5 (160-5405-1) and LT-R-001-5-10 (160-5405-2) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were dried on 02/05/2014, prepared on 02/12/2014 and analyzed on 02/19/2014.

Sample 160-5405-4 was reduced from 500mL to 100mL due to the sample being orange in color. Sample 160-5405-7 was reduced from 500mL to 250mL due to the sample being brown in color. Possible matrix interference. Samples also required the use of multiple syringe filters when loading onto the column cartridges. LT-R-002-GW (160-5405-4), LT-R-003-GW (160-5405-7)

No other difficulties were encountered during the Isotopic Uranium analysis.

All other quality control parameters were within the acceptance limits.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)-Solids

Samples LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), FB014 (160-5405-5), FB015 (160-5405-6) and LT-R-003-GW (160-5405-7) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 02/12/2014 and analyzed on 02/14/2014.

No difficulties were encountered during the Isotopic Uranium analysis.

All quality control parameters were within the acceptance limits.

Case Narrative

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Job ID: 160-5405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

CESIUM-137 & OTHER GAMMA EMITTERS (GS)-Waters

Samples LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), FB014 (160-5405-5), FB015 (160-5405-6) and LT-R-003-GW (160-5405-7) were analyzed for Cesium-137 & Other Gamma Emitters (GS) in accordance with DOE. The samples were prepared and analyzed on 02/06/2014.

The reporting limits were not met for protactinium-231 and -234m despite the activity being below the reporting limit. (MB 160-103495/1-A), FB014 (160-5405-5), FB015 (160-5405-6), LT-R-001-GW (160-5405-3), LT-R-002-GW (160-5405-4), LT-R-003-GW (160-5405-7). The reporting limit for potassium 40 and bismuth 212 was not met for FB015 (160-5405-6), MB 160-103495/1-A). The data is reported with the MDC achieved.

No other difficulties were encountered during the gamma spec analysis.

All other quality control parameters were within the acceptance limits.

RADIUM 226 (NO INGROWTH)-Solids

Samples LT-R-001-0-5 (160-5405-1) and LT-R-001-5-10 (160-5405-2) were analyzed for Radium 226 (No ingrowth) in accordance with GA-01-R. The samples were dried on 02/05/2014, prepared on 02/12/2014 and analyzed on 02/13/2014.

Radium-226 is quantified using the 186 keV line and matrix interference correction for Uranium-235. Doing this has the potential to produce a bias in the result. Evaluation of the Radium-226 result in correlation with the Lead- and Bismuth-214 results, on an individual sample basis is recommended.

Lead-214 analyzed by gamma spectroscopy was detected above the MDC in the method blank. Variations in Compton backgrounds and statistical analyses allow for small area counts in the ROIs of this nuclide. Other Uranium decay chain products are not present in the blank to support lead-214 identification. The data is reported. (160-5405-1 DU), (LCS 160-104495/2-A), (MB 160-104495/1-A), LT-R-001-0-5 (160-5405-1), LT-R-001-5-10 (160-5405-2)

No other difficulties were encountered during the Gamma spec analysis.

All other quality control parameters were within the acceptance limits.

Chain of Custody Record

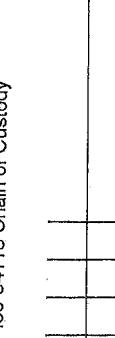
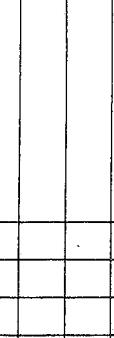
TestAmerica

Temperature on Receipt _____

Drinking Water? Yes No

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client Address		Project Manager Telephone Number /Area Code/Fax Number		Date	30/14	Chain of Custody Number	270345																
City	Unincorp.	State	Zip Code	Site Contact	Lab Contact	Lab Number	Page	of 2															
Project Name and Location (State) Contract/Purchase Order/Quote No.						Special Instructions/ Conditions of Receipt																	
Ellis Koch - Kyr-Gentle Business 625 Ryk Plaza 631-589-1333 Carrier/Waybill Number						  																	
Desire Fresh																							
Matrix						Containers & Preservatives																	
(Containers for each sample may be combined on one line)						Date	Time	% w/w	Sample	Soil	Sept	Upticks	Snobys	Preserves	H2SO4	HNO3	HCl	NaOH	NaBH4	HOAc	Lead	NDC 8260	480-54118 Chain of Custody
LT-C-032-0-2	11/30/14	14:50		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5405		
LT-C-032-2-4	11/30/14	14:53		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LT-C-032-8-10	11/30/14	15:00		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
DUR012	11/30/14	15:00		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LT-R-001-0-5	11/30/14	15:20		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LT-R-001-5-10	11/30/14	15:25		X	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LT-R-001-GW	11/30/14	09:15		X	3	6	3	X	X	X	X	X	X	X	X	X	X	X	X	X			
LT-R-002-0-S	11/30/14																						
LT-R-002-5-10	11/30/14																						
LT-R-002-GW	11/30/14																						
Tri-Blank-1	11/30/14																						
FB014	11/30/14																						
Possible Hazard Identification						Sample Disposal						QC Requirements (Specify)											
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months		(A fee may be assessed if samples are retained longer than 1 month)													
Turn Around Time Required						Date Received By						Date Received By											
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other	Date	Time	Date		Time	Date		Time	Date		Time							
1. Relinquished By						1/30/14	13:00	2. Received By		1/30/14	14:30	3. Received By		1/30/14	09:00	4. Received By		1/30/14	09:45				
2. Relinquished By						Hank Kowar						Temp 3.64, 23.8, 3.2, #1											
3. Relinquished By						Jill Clark						Comments											
												3/14/2014											

Login Sample Receipt Checklist

Client: Posillico Dev Company at Harbor Isle LLC

Job Number: 160-5405-1

Login Number: 5405

List Source: TestAmerica St. Louis

List Number: 1

Creator: Clarke, Jill C

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Thorium (Alpha Spectrometry)	DOE	TAL SL
GA-01-R	Cesium-137 & Other Gamma Emitters (GS)	DOE	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-5405-1	LT-R-001-0-5	Solid	01/31/14 10:20	02/04/14 09:45
160-5405-2	LT-R-001-5-10	Solid	01/31/14 10:25	02/04/14 09:45
160-5405-3	LT-R-001-GW	Water	01/31/14 09:15	02/04/14 09:45
160-5405-4	LT-R-002-GW	Water	01/31/14 11:55	02/04/14 09:45
160-5405-5	FB014	Water	01/31/14 11:05	02/04/14 09:45
160-5405-6	FB015	Water	01/31/14 11:20	02/04/14 09:45
160-5405-7	LT-R-003-GW	Water	01/31/14 12:45	02/04/14 09:45

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-001-0-5

Lab Sample ID: 160-5405-1

Matrix: Solid

Date Collected: 01/31/14 10:20

Date Received: 02/04/14 09:45

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Thorium-228	0.545		0.154	0.161	1.00	0.0824	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Thorium-230	0.584		0.158	0.165	1.00	0.0710	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Thorium-232	0.442		0.136	0.141	1.00	0.0565	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Thorium-229	89.5		30 - 110					02/12/14 10:27	02/19/14 21:11	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Uranium-233/234	0.586		0.167	0.174	1.00	0.0613	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Uranium-235/236	-0.000918	U	0.0454	0.0454	1.00	0.120	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Uranium-238	0.467		0.151	0.156	1.00	0.0837	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Uranium-232	76.4		30 - 110					02/12/14 10:27	02/19/14 21:17	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Actinium 228	0.832		0.0317	0.0906	0.100	0.0292	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Bismuth-212	0.935		0.109	0.146	0.100	0.0958	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Bismuth-214	0.716		0.0236	0.0781	0.100	0.0163	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Lead-210	0.759		0.164	0.187	0.100	0.196	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Lead-212	0.892		0.0167	0.117	0.100	0.0132	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Lead-214	0.787		0.0212	0.0845	0.100	0.0173	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Potassium-40	10.4		0.223	1.09	2.50	0.0866	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Protactinium-231	-0.351	U	0.161	0.166	1.00	0.261	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Radium-226	1.59		0.159	0.320	1.00	0.179	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Radium-228	0.832		0.0317	0.0906	1.00	0.0292	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Thorium-234	0.914		0.158	0.185	1.00	0.197	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Thallium-208	0.268		0.0127	0.0306	0.100	0.00967	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Uranium-235	0.0628		0.0281	0.0288	1.00	0.0438	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Uranium-238	0.914		0.158	0.185	1.00	0.197	pCi/g	02/12/14 10:12	02/13/14 02:46	1
Protactinium-234m	1.05	U	0.731	0.739	10.0	1.15	pCi/g	02/12/14 10:12	02/13/14 02:46	1

Client Sample ID: LT-R-001-5-10

Lab Sample ID: 160-5405-2

Matrix: Solid

Date Collected: 01/31/14 10:25

Date Received: 02/04/14 09:45

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Thorium-228	0.626		0.174	0.181	1.00	0.102	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Thorium-230	0.663		0.176	0.184	1.00	0.0807	pCi/g	02/12/14 10:27	02/19/14 21:11	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-001-5-10

Lab Sample ID: 160-5405-2

Date Collected: 01/31/14 10:25

Matrix: Solid

Date Received: 02/04/14 09:45

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Thorium-232	0.766		0.190	0.200	1.00	0.0947	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Thorium-229	83.6		30 - 110					02/12/14 10:27	02/19/14 21:11	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Uranium-233/234	0.590		0.161	0.169	1.00	0.0732	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Uranium-235/236	0.0670		0.0599	0.0601	1.00	0.0402	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Uranium-238	0.684		0.173	0.183	1.00	0.0763	pCi/g	02/12/14 10:27	02/19/14 21:17	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Uranium-232	85.9		30 - 110					02/12/14 10:27	02/19/14 21:17	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Actinium 228	0.991		0.0448	0.111	0.100	0.0354	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Bismuth-212	0.956		0.125	0.160	0.100	0.115	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Bismuth-214	0.760		0.0297	0.0844	0.100	0.0219	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Lead-210	0.937		0.188	0.218	0.100	0.230	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Lead-212	0.945		0.0200	0.124	0.100	0.0194	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Lead-214	0.858		0.0274	0.0933	0.100	0.0222	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Potassium-40	18.0		0.328	1.87	2.50	0.127	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Protactinium-231	-0.264	U	0.179	0.182	1.00	0.293	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Radium-226	1.87		0.200	0.383	1.00	0.218	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Radium-228	0.991		0.0448	0.111	1.00	0.0354	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Thorium-234	0.888		0.186	0.208	1.00	0.235	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Thallium-208	0.316		0.0137	0.0355	0.100	0.0105	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Uranium-235	0.0883		0.0308	0.0321	1.00	0.0483	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Uranium-238	0.888		0.186	0.208	1.00	0.235	pCi/g	02/12/14 10:12	02/13/14 02:47	1
Protactinium-234m	2.59		1.15	1.18	10.0	1.15	pCi/g	02/12/14 10:12	02/13/14 02:47	1

Client Sample ID: LT-R-001-GW

Lab Sample ID: 160-5405-3

Date Collected: 01/31/14 09:15

Matrix: Water

Date Received: 02/04/14 09:45

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.426		0.143	0.148	1.00	0.136	pCi/L	02/06/14 13:39	02/11/14 18:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					02/06/14 13:39	02/11/14 18:58	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-001-GW

Lab Sample ID: 160-5405-3

Date Collected: 01/31/14 09:15

Matrix: Water

Date Received: 02/04/14 09:45

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.535		0.254	0.259	1.00	0.364	pCi/L	02/05/14 14:41	02/10/14 11:43	1
Carrier										
Ba Carrier	87.9		40 - 110					02/05/14 14:41	02/10/14 11:43	1
Y Carrier	85.9		40 - 110					02/05/14 14:41	02/10/14 11:43	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Thorium-228	0.134		0.0911	0.0918	1.00	0.115	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-230	0.117		0.0768	0.0774	1.00	0.0801	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-232	0.0324		0.0374	0.0375	1.00	0.0324	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Tracer										
Thorium-229	79.0		30 - 110					02/12/14 12:32	02/17/14 19:51	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Uranium-233/234	0.0554	U	0.0698	0.0699	1.00	0.105	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-235/236	0.0636		0.0735	0.0737	1.00	0.0636	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-238	0.132		0.0966	0.0973	1.00	0.0823	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Tracer										
Uranium-232	83.7		30 - 110					02/12/14 12:32	02/14/14 18:29	1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Actinium-228	12.1	U	7.15	7.25	50.0	12.5	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Cesium-137	-2.31	U	3.28	3.28	20.0	5.43	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Bismuth-212	12.1	U	28.1	28.2	50.0	47.6	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Bismuth-214	57.4		10.0	11.5	50.0	11.3	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Lead-212	0.146	U	4.14	4.14	50.0	7.88	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Lead-214	56.1		7.79	9.63	50.0	10.4	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Potassium-40	13.0	U G	42.7	42.7	75.0	75.7	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Protactinium-234m	-2.43	U G	289	289	75.0	508	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Protactinium-231	-33.8	U G	71.7	71.8	75.0	120	pCi/L	02/06/14 15:57	02/06/14 18:29	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-002-GW

Lab Sample ID: 160-5405-4

Date Collected: 01/31/14 11:55

Matrix: Water

Date Received: 02/04/14 09:45

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	7.40		0.803	1.04	1.00	0.283	pCi/L	02/06/14 13:39	02/11/14 18:58	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	69.6		40 - 110					02/06/14 13:39	02/11/14 18:58	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	3.07		0.655	0.713	1.00	0.730	pCi/L	02/05/14 14:41	02/10/14 11:43	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					02/05/14 14:41	02/10/14 11:43	1
Y Carrier	87.6		40 - 110					02/05/14 14:41	02/10/14 11:43	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Thorium-228	4.22		1.14	1.20	1.00	0.910	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-230	7.79		1.45	1.59	1.00	0.437	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-232	4.69		1.11	1.18	1.00	0.198	pCi/L	02/12/14 12:32	02/17/14 19:51	1
<i>Tracer</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Thorium-229	62.3		30 - 110					02/12/14 12:32	02/17/14 19:51	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Uranium-233/234	3.37		1.20	1.24	1.00	0.731	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-235/236	0.0960	U	0.264	0.264	1.00	0.619	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-238	6.06		1.58	1.66	1.00	0.308	pCi/L	02/12/14 12:32	02/14/14 18:29	1
<i>Tracer</i>	%Yield	Qualifier	<i>Limits</i>					Prepared	Analyzed	Dil Fac
Uranium-232	67.0		30 - 110					02/12/14 12:32	02/14/14 18:29	1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Actinium-228	27.2		9.31	9.69	50.0	13.4	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Cesium-137	1.49	U	2.33	2.34	20.0	3.88	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Bismuth-212	25.2	U	28.7	28.8	50.0	47.0	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Bismuth-214	21.7		5.94	6.32	50.0	9.93	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Lead-212	11.0		4.49	4.70	50.0	7.83	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Lead-214	34.2		7.74	8.51	50.0	9.81	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Potassium-40	88.4		33.6	34.7	75.0	51.0	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Protactinium-234m	-362	U G	1090	1090	75.0	554	pCi/L	02/06/14 15:57	02/06/14 18:28	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-002-GW

Lab Sample ID: 160-5405-4

Date Collected: 01/31/14 11:55

Matrix: Water

Date Received: 02/04/14 09:45

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Protactinium-231	-14.8	UG	64.7	64.8	75.0	109	pCi/L	02/06/14 15:57	02/06/14 18:28	1

Client Sample ID: FB014

Lab Sample ID: 160-5405-5

Date Collected: 01/31/14 11:05

Matrix: Water

Date Received: 02/04/14 09:45

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-226	0.0875	U	0.0963	0.0966	1.00	0.155	pCi/L	02/06/14 13:39	02/11/14 18:58	1
Carrier										
Ba Carrier	87.0			40 - 110				02/06/14 13:39	02/11/14 18:58	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Radium-228	0.217	U	0.236	0.237	1.00	0.387	pCi/L	02/05/14 14:41	02/10/14 11:43	1
Carrier										
Ba Carrier	93.5			40 - 110				02/05/14 14:41	02/10/14 11:43	1
Y Carrier	85.5			40 - 110				02/05/14 14:41	02/10/14 11:43	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Thorium-228	0.0384	U	0.0676	0.0677	1.00	0.122	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-230										
Thorium-232	0.173		0.0893	0.0905	1.00	0.0345	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Tracer	0.0229	U	0.0324	0.0324	1.00	0.0343	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-229	75.4			30 - 110				02/12/14 12:32	02/17/14 19:51	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Uranium-233/234	0.0436	U	0.0617	0.0618	1.00	0.0977	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-235/236										
Uranium-238	0.000	U	0.0109	0.0109	1.00	0.0651	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Tracer	0.000	U	0.00870	0.00870	1.00	0.0522	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-232	82.8			30 - 110				02/12/14 12:32	02/14/14 18:29	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: FB014

Lab Sample ID: 160-5405-5

Date Collected: 01/31/14 11:05

Matrix: Water

Date Received: 02/04/14 09:45

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Actinium-228	18.2		9.11	9.28	50.0	9.69	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Cesium-137	0.0458	U	1.76	1.76	20.0	3.16	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Bismuth-212	17.5	U	28.6	28.7	50.0	47.9	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Bismuth-214	5.90	U	7.64	7.66	50.0	10.8	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Lead-212	-1.53	U	4.89	4.89	50.0	7.40	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Lead-214	-4.49	U	10.7	10.8	50.0	10.6	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Potassium-40	18.0	U	30.2	30.2	75.0	59.0	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Protactinium-234m	364	UG	293	295	75.0	474	pCi/L	02/06/14 15:57	02/06/14 18:29	1
Protactinium-231	-38.4	UG	69.5	69.6	75.0	116	pCi/L	02/06/14 15:57	02/06/14 18:29	1

Client Sample ID: FB015

Lab Sample ID: 160-5405-6

Date Collected: 01/31/14 11:20

Matrix: Water

Date Received: 02/04/14 09:45

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0567	U	0.0858	0.0859	1.00	0.147	pCi/L	02/06/14 13:39	02/11/14 18:58	1
<i>Carrier</i>										
Ba Carrier	92.9		<i>Limits</i>					Prepared	Analyzed	Dil Fac
			40 - 110					02/06/14 13:39	02/11/14 18:58	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-228	0.00759	U	0.186	0.186	1.00	0.333	pCi/L	02/05/14 14:41	02/10/14 11:43	1
<i>Carrier</i>										
Ba Carrier	104		<i>Limits</i>					Prepared	Analyzed	Dil Fac
Y Carrier	89.2		40 - 110					02/05/14 14:41	02/10/14 11:43	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Thorium-228	0.130	U	0.0977	0.0983	1.00	0.132	pCi/L	02/12/14 12:32	02/17/14 19:51	1
<i>Thorium-230</i>										
Thorium-230	0.175		0.0900	0.0912	1.00	0.0399	pCi/L	02/12/14 12:32	02/17/14 19:51	1
Thorium-232	0.0284	U	0.0403	0.0403	1.00	0.0636	pCi/L	02/12/14 12:32	02/17/14 19:51	1
<i>Tracer</i>										
Thorium-229	72.9		<i>Limits</i>					Prepared	Analyzed	Dil Fac
			30 - 110					02/12/14 12:32	02/17/14 19:51	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Uranium-233/234	0.0472	U	0.0601	0.0602	1.00	0.0830	pCi/L	02/12/14 12:32	02/14/14 18:29	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: FB015

Lab Sample ID: 160-5405-6

Date Collected: 01/31/14 11:20

Matrix: Water

Date Received: 02/04/14 09:45

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Uranium-235/236	0.0641		0.0740	0.0742	1.00	0.0641	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-238	0.0428	U	0.0605	0.0607	1.00	0.0959	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Tracer	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Uranium-232	81.8		30 - 110				02/12/14 12:32		02/14/14 18:29	1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Actinium-228	8.54	U	10.2	10.2	50.0	16.7	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Cesium-137	1.51	U	2.31	2.32	20.0	3.87	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Bismuth-212	28.6	U G	33.3	33.4	50.0	54.5	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Bismuth-214	4.03	U	5.49	5.50	50.0	12.1	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Lead-212	7.62	U	7.72	7.78	50.0	9.90	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Lead-214	-0.0129	U	0.107	0.107	50.0	12.3	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Potassium-40	-76.9	U G	143	143	75.0	92.1	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Protactinium-234m	-286	U G	1660	1660	75.0	765	pCi/L	02/06/14 15:57	02/06/14 18:28	1
Protactinium-231	-45.8	U G	76.5	76.6	75.0	127	pCi/L	02/06/14 15:57	02/06/14 18:28	1

Client Sample ID: LT-R-003-GW

Lab Sample ID: 160-5405-7

Date Collected: 01/31/14 12:45

Matrix: Water

Date Received: 02/04/14 09:45

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-226	3.53		0.319	0.450	1.00	0.125	pCi/L	02/06/14 13:39	02/12/14 18:32	1
Carrier	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110				02/06/14 13:39		02/12/14 18:32	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Radium-228	1.80		0.345	0.383	1.00	0.369	pCi/L	02/05/14 14:41	02/10/14 11:43	1
Carrier	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110				02/05/14 14:41		02/10/14 11:43	1
Y Carrier	85.5		40 - 110				02/05/14 14:41		02/10/14 11:43	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			(2σ+/-)	(2σ+/-)						
Thorium-228	2.57		0.500	0.545	1.00	0.289	pCi/L	02/12/14 12:32	02/18/14 21:01	1
Thorium-230	4.16		0.613	0.705	1.00	0.0678	pCi/L	02/12/14 12:32	02/18/14 21:01	1

TestAmerica St. Louis

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Client Sample ID: LT-R-003-GW

Lab Sample ID: 160-5405-7

Date Collected: 01/31/14 12:45

Matrix: Water

Date Received: 02/04/14 09:45

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Thorium-232	2.18		0.443	0.479	1.00	0.0674	pCi/L	02/12/14 12:32	02/18/14 21:01	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Thorium-229	72.4		30 - 110					02/12/14 12:32	02/18/14 21:01	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Uranium-233/234	0.358		0.226	0.228	1.00	0.107	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-235/236	0.178		0.178	0.179	1.00	0.134	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Uranium-238	0.669		0.312	0.317	1.00	0.173	pCi/L	02/12/14 12:32	02/14/14 18:29	1
Tracer	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Uranium-232	78.2		30 - 110					02/12/14 12:32	02/14/14 18:29	1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	(2σ+/-)						
Actinium-228	7.82	U	8.35	8.38	50.0	14.7	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Cesium-137	0.0798	U	2.46	2.46	20.0	4.27	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Bismuth-212	15.9	U	25.4	25.4	50.0	42.4	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Bismuth-214	64.7		7.98	10.3	50.0	7.97	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Lead-212	2.98	U	4.03	4.04	50.0	7.36	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Lead-214	71.2		8.81	11.5	50.0	10.4	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Potassium-40	3.30	U	30.7	30.7	75.0	60.2	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Protactinium-234m	38.0	U G	22.5	22.8	75.0	596	pCi/L	02/06/14 15:57	02/06/14 18:30	1
Protactinium-231	7.28	U G	56.2	56.2	75.0	95.7	pCi/L	02/06/14 15:57	02/06/14 18:30	1

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-103475/1-A

Matrix: Water

Analysis Batch: 104233

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103475

Analyte	MB MB		Count (2σ+/-)	Total (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-226	0.06645	U	0.0933	0.0935	1.00	0.158	pCi/L	02/06/14 13:39	02/11/14 18:57	1
Carrier										
Ba Carrier	92.0			40 - 110				02/06/14 13:39	02/11/14 18:57	1

Lab Sample ID: LCS 160-103475/2-A

Matrix: Water

Analysis Batch: 104233

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 103475

Analyte	Spike		LCS Result	LCS Qual	Total		RL	MDC	Unit	%Rec.
	Added	Result			Uncert. (2σ+/-)	%Rec.				
Radium-226	11.2	12.54	1.31	1.00	0.122	pCi/L	112	68 - 137		
Carrier										
Ba Carrier	91.4		40 - 110							

Lab Sample ID: 160-5405-5 DU

Matrix: Water

Analysis Batch: 104233

Client Sample ID: FB014

Prep Type: Total/NA

Prep Batch: 103475

Analyte	Sample		DU Result	DU Qual	Total		RL	MDC	Unit	RER
	Result	Qual			Uncert. (2σ+/-)	RER				
Radium-226	0.0875	U	0.1224	U	0.101	1.00	0.149	pCi/L		0.18
Carrier										
Ba Carrier	88.2		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-103312/1-A

Matrix: Water

Analysis Batch: 103897

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103312

Analyte	MB MB		Count (2σ+/-)	Total (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	-0.05795	U	0.160	0.160	1.00	0.300	pCi/L	02/05/14 14:41	02/10/14 11:42	1
Carrier										
Ba Carrier	104		40 - 110					02/05/14 14:41	02/10/14 11:42	1
Y Carrier	89.6		40 - 110					02/05/14 14:41	02/10/14 11:42	1

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-103312/2-A

Matrix: Water

Analysis Batch: 103897

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 103312

Analyte	Spike		LCS	LCS	Total		RL	MDC	Unit	%Rec.	Limits
	Added	Result	Result	Qual	Uncert. (2σ+/-)						
Radium-228	3.98	3.310			0.508	1.00	0.353	pCi/L		83	56 - 140

Carrier LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	87.1		40 - 110

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 103897

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 103312

Analyte	Sample	Sample	DU		DU		Total		RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)								
Radium-228	0.535		0.1935	U	0.219	1.00	0.359	pCi/L				0.71	1

Carrier DU DU

Carrier	%Yield	Qualifier	Limits
Ba Carrier	95.0		40 - 110
Y Carrier	87.6		40 - 110

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Lab Sample ID: MB 160-104496/1-A

Matrix: Solid

Analysis Batch: 106221

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104496

Analyte	Count		Total		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	MB	MB	Uncert.	Uncert. (2σ+/-)						
Thorium-228	0.04611	U	0.0612	0.0613	1.00	0.101	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Thorium-230	0.06597	U	0.0598	0.0601	1.00	0.0787	pCi/g	02/12/14 10:27	02/19/14 21:11	1
Thorium-232	-0.003879	U	0.00549	0.00550	1.00	0.0537	pCi/g	02/12/14 10:27	02/19/14 21:11	1

Tracer MB MB

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	MB	MB				
Thorium-229	87.9		30 - 110	02/12/14 10:27	02/19/14 21:11	1

Lab Sample ID: LCS 160-104496/2-A

Matrix: Solid

Analysis Batch: 106245

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104496

Analyte	Spike		LCS	LCS	Total		RL	MDC	Unit	%Rec.	Limits
	Added	Result	Result	Qual	Uncert. (2σ+/-)						
Thorium-230	24.5	28.10			2.89	1.00	0.233	pCi/g		115	81 - 118

Tracer LCS LCS

Tracer	%Yield	Qualifier	Limits
Thorium-229	76.0		30 - 110

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-5405-1 DU

Matrix: Solid

Analysis Batch: 106144

Client Sample ID: LT-R-001-0-5

Prep Type: Total/NA

Prep Batch: 104496

Analyte	Sample	Sample	DU	DU	Total			RER	Limit
	Result	Qual	Result	Qual	(2σ+/-)	RL	MDC	Unit	
Thorium-228	0.545		0.8142		0.213	1.00	0.105	pCi/g	0.72
Thorium-230	0.584		0.6556		0.188	1.00	0.0903	pCi/g	0.20
Thorium-232	0.442		0.6586		0.190	1.00	0.102	pCi/g	0.65
Tracer	DU	DU							
	%Yield	Qualifier		Limits					
Thorium-229	77.4			30 - 110					

Lab Sample ID: MB 160-104514/1-A

Matrix: Water

Analysis Batch: 105555

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104514

Analyte	Sample	Sample	Count	DU	Total	Prepared	Analyzed	Dil Fac
	Result	Qual	Uncert.	(2σ+/-)	Uncert.			
Thorium-228	0.08048	U	0.0818	0.0821	1.00	0.127	pCi/L	02/12/14 12:32
Thorium-230	0.1357		0.0727	0.0736	1.00	0.0292	pCi/L	02/12/14 12:32
Thorium-232	0.001208	U	0.0164	0.0164	1.00	0.0535	pCi/L	02/12/14 12:32
Tracer	MB	MB						
	%Yield	Qualifier		Limits				
Thorium-229	85.6			30 - 110				
	Prepared	Analyzed	Dil Fac					
	02/12/14 12:32	02/17/14 19:51	1					

Lab Sample ID: LCS 160-104514/2-A

Matrix: Water

Analysis Batch: 105556

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104514

Analyte	Sample	Sample	Spike	DU	Total	%Rec.	
	Result	Qual	Added	(2σ+/-)	Uncert.		
Thorium-230			8.64	9.391	1.01	1.00	0.0705
Tracer	LCS	LCS					
	%Yield	Qualifier		Limits			
Thorium-229	77.8			30 - 110			
	Prepared	Analyzed	Dil Fac				
	02/12/14 12:32	02/17/14 19:51	1				

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105558

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104514

Analyte	Sample	Sample	DU	DU	Total	RER	Limit		
	Result	Qual	Result	Qual	(2σ+/-)	RL	MDC	Unit	
Thorium-228	0.134		0.1378		0.101	1.00	0.136	pCi/L	0.02
Thorium-230	0.117		0.2124		0.107	1.00	0.0924	pCi/L	0.52
Thorium-232	0.0324		0.02963	U	0.0409	1.00	0.0634	pCi/L	0.04
Tracer	DU	DU							
	%Yield	Qualifier		Limits					
Thorium-229	74.6			30 - 110					

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-104497/1-A

Matrix: Solid

Analysis Batch: 106156

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104497

Analyte	MB MB		Uncert.	Total		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier		(2σ+/-)	(2σ+/-)						
Uranium-233/234	0.06962		0.0577	0.0579	1.00	0.0615	pCi/g		02/12/14 10:27	02/19/14 21:16	1
Uranium-235/236	0.0000	U	0.00505	0.00505	1.00	0.0404	pCi/g		02/12/14 10:27	02/19/14 21:16	1
Uranium-238	0.06071		0.0532	0.0534	1.00	0.0561	pCi/g		02/12/14 10:27	02/19/14 21:16	1
Tracer	MB MB			Limits					Prepared	Analyzed	Dil Fac
Uranium-232	%Yield	Qualifier		30 - 110					02/12/14 10:27	02/19/14 21:16	1

Lab Sample ID: LCS 160-104497/2-A

Matrix: Solid

Analysis Batch: 106157

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104497

Analyte	Spike LCS		LCS Result	LCS Qual	Total		RL	MDC	Unit	%Rec.	Limits
	Added	Result			Uncert.	(2σ+/-)					
Uranium-233/234	6.37	6.448			0.768	1.00	0.0524	pCi/g		101	84 - 120
Uranium-238	6.51	6.184			0.744	1.00	0.0345	pCi/g		95	82 - 122
Tracer	LCS LCS			Limits							
Uranium-232	%Yield	Qualifier		30 - 110							

Lab Sample ID: 160-5405-1 DU

Matrix: Solid

Analysis Batch: 106201

Client Sample ID: LT-R-001-0-5

Prep Type: Total/NA

Prep Batch: 104497

Analyte	Sample Sample		DU DU		Total		RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert.	(2σ+/-)					
Uranium-233/234	0.586		0.5208		0.155	1.00	0.0673	pCi/g		0.20	1
Uranium-235/236	-0.00091	U	0.02104	U	0.0373	1.00	0.0673	pCi/g		0.27	1
Uranium-238	0.467		0.5087		0.152	1.00	0.0311	pCi/g		0.13	1
Tracer	DU DU			Limits							
Uranium-232	%Yield	Qualifier		30 - 110							

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Analyte	MB MB		Count Uncert.		Total Uncert.		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	(2σ+/-)	(2σ+/-)								
Uranium-233/234	0.008228	U	0.0349	0.0349	1.00	0.0922	pCi/L		02/12/14 12:32	02/14/14 18:29	1	
Uranium-235/236	0.01024	U	0.0434	0.0435	1.00	0.115	pCi/L		02/12/14 12:32	02/14/14 18:29	1	
Uranium-238	0.0000	U	0.00821	0.00821	1.00	0.0493	pCi/L		02/12/14 12:32	02/14/14 18:29	1	

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: LCS 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-104516/2-A

Matrix: Water

Analysis Batch: 105409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 105411

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 104516

Lab Sample ID: MB 160-103495/1-A

Matrix: Water

Analysis Batch: 103403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103495

Lab Sample ID: MB 160-104516/1-A

Matrix: Water

Analysis Batch: 105408

Client Sample ID: Method Blank

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-103495/2-A

Matrix: Water

Analysis Batch: 103834

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 103495

Analyte	Spike Added	LCS		Uncert. (2σ+/-)	Total			%Rec.	Limits
		Result	Qual		RL	MDC	Unit		
Americium-241	137000	136100		15700		429	pCi/L	99	90 - 111
Cesium-137	50400	49080		4920	20.0	157	pCi/L	97	90 - 111
Cobalt-60	59200	56240		5560		112	pCi/L	95	89 - 110

Lab Sample ID: 160-5405-3 DU

Matrix: Water

Analysis Batch: 103836

Client Sample ID: LT-R-001-GW

Prep Type: Total/NA

Prep Batch: 103495

Analyte	Sample		DU		Uncert. (2σ+/-)	Total			RER	Limit
	Result	Qual	Result	Qual		RL	MDC	Unit		
Actinium-228	12.1	U	-1.236	U	10.4	50.0	17.4	pCi/L	0.75	1
Cesium-137	-2.31	U	0.03227	U	2.75	20.0	4.75	pCi/L	0.39	1
Bismuth-212	12.1	U	-16.51	U G	33.9	50.0	56.9	pCi/L	0.46	1
Bismuth-214	57.4		36.35		10.4	50.0	11.7	pCi/L	0.96	1
Lead-212	0.146	U	1.186	U	4.30	50.0	8.08	pCi/L	0.12	1
Lead-214	56.1		45.59		10.2	50.0	10.5	pCi/L	0.53	1
Potassium-40	13.0	U G	-75.40	U G	108	75.0	78.3	pCi/L	0.59	1
Protactinium-234m	-2.43	U G	247.7	U G	290	75.0	469	pCi/L	0.43	1
Protactinium-231	-33.8	U G	11.07	U G	54.6	75.0	138	pCi/L	0.35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-104495/1-A

Matrix: Solid

Analysis Batch: 105155

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 104495

Analyte	MB		Uncert. (2σ+/-)	Count		Uncert. (2σ+/-)	Total			Prepared	Analyzed	Dil Fac
	Result	MB Qualifier		Result	(2σ+/-)		RL	MDC	Unit			
Actinium 228	0.008652	U	0.00819	0.00824	0.100	0.0143	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Bismuth-212	0.001881	U	0.0264	0.0264	0.100	0.0472	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Bismuth-214	-0.001624	U	0.00891	0.00891	0.100	0.0120	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Lead-210	0.01332	U	0.0493	0.0493	0.100	0.0836	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Lead-212	0.004461	U	0.00455	0.00459	0.100	0.00652	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Lead-214	0.01292		0.00539	0.00555	0.100	0.00634	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Potassium-40	-0.07470	U	0.157	0.157	2.50	0.0927	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Protactinium-231	0.02156	U	0.0505	0.0505	1.00	0.0854	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Radium-226	0.02563	U	0.0472	0.0475	1.00	0.0880	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Radium-228	0.008652	U	0.00819	0.00824	1.00	0.0143	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Thorium-234	0.01201	U	0.0286	0.0286	1.00	0.0782	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Thallium-208	0.002789	U	0.00294	0.00295	0.100	0.00421	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Uranium-235	0.008551	U	0.0134	0.0134	1.00	0.0172	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Uranium-238	0.01201	U	0.0286	0.0286	1.00	0.0782	pCi/g	02/12/14 10:12	02/13/14 02:39			1
Protactinium-234m	-0.2368	U	0.893	0.893	10.0	0.710	pCi/g	02/12/14 10:12	02/13/14 02:39			1

TestAmerica St. Louis

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-104495/2-A

Matrix: Solid

Analysis Batch: 105512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 104495

Analyte	Spike Added	LCS		Uncert. (2σ+/-)		RL	MDC	Unit	%Rec	Limits	%Rec.
		Result	Qual	Total	%						
Americium-241	101	104.4		10.9		0.626	pCi/g	103	87 - 116		
Cesium-137	35.8	36.33		3.81	0.100	0.232	pCi/g	102	87 - 120		
Cobalt-60	41.9	42.13		4.26		0.161	pCi/g	100	87 - 115		

Lab Sample ID: 160-5405-1 DU

Matrix: Solid

Analysis Batch: 105514

Client Sample ID: LT-R-001-0-5

Prep Type: Total/NA

Prep Batch: 104495

Analyte	Sample		DU		Uncert. (2σ+/-)		RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Total	%					
Actinium 228	0.832		0.8058		0.0885	0.100	0.0316	pCi/g	0.14	1	
Bismuth-212	0.935		0.8580		0.115	0.100	0.0883	pCi/g	0.30	1	
Bismuth-214	0.716		0.7104		0.0781	0.100	0.0184	pCi/g	0.04	1	
Lead-210	0.759		0.8262		0.177	0.100	0.184	pCi/g	0.19	1	
Lead-212	0.892		0.8117		0.106	0.100	0.0169	pCi/g	0.36	1	
Lead-214	0.787		0.8042		0.0864	0.100	0.0186	pCi/g	0.10	1	
Potassium-40	10.4		10.90		1.14	2.50	0.0953	pCi/g	0.23	1	
Protactinium-231	-0.351	U	-0.3301	U	0.159	1.00	0.251	pCi/g	0.06	1	
Radium-226	1.59		1.663		0.341	1.00	0.191	pCi/g	0.11	1	
Radium-228	0.832		0.8058		0.0885	1.00	0.0316	pCi/g	0.14	1	
Thorium-234	0.914		0.7970		0.178	1.00	0.199	pCi/g	0.32	1	
Thallium-208	0.268		0.2702		0.0304	0.100	0.00911	pCi/g	0.03	1	
Uranium-235	0.0628		0.05683		0.0318	1.00	0.0417	pCi/g	0.1	1	
Uranium-238	0.914		0.7970		0.178	1.00	0.199	pCi/g	0.32	1	
Protactinium-234	1.05	U	1.692		0.797	10.0	0.842	pCi/g	0.42	1	
m											

TestAmerica St. Louis

QC Association Summary

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Rad

Leach Batch: 103298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-1	LT-R-001-0-5	Total/NA	Solid	Dry and Grind	
160-5405-1 DU	LT-R-001-0-5	Total/NA	Solid	Dry and Grind	
160-5405-2	LT-R-001-5-10	Total/NA	Solid	Dry and Grind	

Prep Batch: 103312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-3	LT-R-001-GW	Total/NA	Water	PrecSep_0	
160-5405-3 DU	LT-R-001-GW	Total/NA	Water	PrecSep_0	
160-5405-4	LT-R-002-GW	Total/NA	Water	PrecSep_0	
160-5405-5	FB014	Total/NA	Water	PrecSep_0	
160-5405-6	FB015	Total/NA	Water	PrecSep_0	
160-5405-7	LT-R-003-GW	Total/NA	Water	PrecSep_0	
LCS 160-103312/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-103312/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 103475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-3	LT-R-001-GW	Total/NA	Water	PrecSep_0	
160-5405-4	LT-R-002-GW	Total/NA	Water	PrecSep_0	
160-5405-5	FB014	Total/NA	Water	PrecSep_0	
160-5405-5 DU	FB014	Total/NA	Water	PrecSep_0	
160-5405-6	FB015	Total/NA	Water	PrecSep_0	
160-5405-7	LT-R-003-GW	Total/NA	Water	PrecSep_0	
LCS 160-103475/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-103475/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 103495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-3	LT-R-001-GW	Total/NA	Water	Fill_Geo-0	
160-5405-3 DU	LT-R-001-GW	Total/NA	Water	Fill_Geo-0	
160-5405-4	LT-R-002-GW	Total/NA	Water	Fill_Geo-0	
160-5405-5	FB014	Total/NA	Water	Fill_Geo-0	
160-5405-6	FB015	Total/NA	Water	Fill_Geo-0	
160-5405-7	LT-R-003-GW	Total/NA	Water	Fill_Geo-0	
LCS 160-103495/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-0	
MB 160-103495/1-A	Method Blank	Total/NA	Water	Fill_Geo-0	

Prep Batch: 104495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-1	LT-R-001-0-5	Total/NA	Solid	Fill_Geo-0	103298
160-5405-1 DU	LT-R-001-0-5	Total/NA	Solid	Fill_Geo-0	103298
160-5405-2	LT-R-001-5-10	Total/NA	Solid	Fill_Geo-0	103298
LCS 160-104495/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
MB 160-104495/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	

Prep Batch: 104496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-1	LT-R-001-0-5	Total/NA	Solid	ExtChrom	103298
160-5405-1 DU	LT-R-001-0-5	Total/NA	Solid	ExtChrom	103298
160-5405-2	LT-R-001-5-10	Total/NA	Solid	ExtChrom	103298
LCS 160-104496/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	

TestAmerica St. Louis

QC Association Summary

Client: Posillico Dev Company at Harbor Isle LLC
 Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Rad (Continued)

Prep Batch: 104496 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-104496/1-A	Method Blank	Total/NA	Solid	ExtChrom	

Prep Batch: 104497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-1	LT-R-001-0-5	Total/NA	Solid	ExtChrom	103298
160-5405-1 DU	LT-R-001-0-5	Total/NA	Solid	ExtChrom	103298
160-5405-2	LT-R-001-5-10	Total/NA	Solid	ExtChrom	103298
LCS 160-104497/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
MB 160-104497/1-A	Method Blank	Total/NA	Solid	ExtChrom	

Prep Batch: 104514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-3	LT-R-001-GW	Total/NA	Water	ExtChrom	
160-5405-3 DU	LT-R-001-GW	Total/NA	Water	ExtChrom	
160-5405-4	LT-R-002-GW	Total/NA	Water	ExtChrom	
160-5405-5	FB014	Total/NA	Water	ExtChrom	
160-5405-6	FB015	Total/NA	Water	ExtChrom	
160-5405-7	LT-R-003-GW	Total/NA	Water	ExtChrom	
LCS 160-104514/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-104514/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 104516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-3	LT-R-001-GW	Total/NA	Water	ExtChrom	
160-5405-3 DU	LT-R-001-GW	Total/NA	Water	ExtChrom	
160-5405-4	LT-R-002-GW	Total/NA	Water	ExtChrom	
160-5405-5	FB014	Total/NA	Water	ExtChrom	
160-5405-6	FB015	Total/NA	Water	ExtChrom	
160-5405-7	LT-R-003-GW	Total/NA	Water	ExtChrom	
LCS 160-104516/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-104516/1-A	Method Blank	Total/NA	Water	ExtChrom	

Tracer/Carrier Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
160-5405-3	LT-R-001-GW	88.5
160-5405-4	LT-R-002-GW	69.6
160-5405-5	FB014	87.0
160-5405-5 DU	FB014	88.2
160-5405-6	FB015	92.9
160-5405-7	LT-R-003-GW	87.0
LCS 160-103475/2-A	Lab Control Sample	91.4
MB 160-103475/1-A	Method Blank	92.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-5405-3	LT-R-001-GW	87.9	85.9
160-5405-3 DU	LT-R-001-GW	95.0	87.6
160-5405-4	LT-R-002-GW	84.7	87.6
160-5405-5	FB014	93.5	85.5
160-5405-6	FB015	104	89.2
160-5405-7	LT-R-003-GW	93.2	85.5
LCS 160-103312/2-A	Lab Control Sample	98.8	87.1
MB 160-103312/1-A	Method Blank	104	89.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Th-229 (30-110)
160-5405-1	LT-R-001-0-5	89.5
160-5405-1 DU	LT-R-001-0-5	77.4
160-5405-2	LT-R-001-5-10	83.6
LCS 160-104496/2-A	Lab Control Sample	76.0
MB 160-104496/1-A	Method Blank	87.9

Tracer/Carrier Legend

Th-229 = Thorium-229

TestAmerica St. Louis

Tracer/Carrier Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Th-229 (30-110)	_____
160-5405-3	LT-R-001-GW	79.0	_____
160-5405-3 DU	LT-R-001-GW	74.6	_____
160-5405-4	LT-R-002-GW	62.3	_____
160-5405-5	FB014	75.4	_____
160-5405-6	FB015	72.9	_____
160-5405-7	LT-R-003-GW	72.4	_____
LCS 160-104514/2-A	Lab Control Sample	77.8	_____
MB 160-104514/1-A	Method Blank	85.6	_____

Tracer/Carrier Legend

Th-229 = Thorium-229

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		U-232 (30-110)	_____
160-5405-1	LT-R-001-0-5	76.4	_____
160-5405-1 DU	LT-R-001-0-5	88.6	_____
160-5405-2	LT-R-001-5-10	85.9	_____
LCS 160-104497/2-A	Lab Control Sample	82.3	_____
MB 160-104497/1-A	Method Blank	85.9	_____

Tracer/Carrier Legend

U-232 = Uranium-232

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		U-232 (30-110)	_____
160-5405-3	LT-R-001-GW	83.7	_____
160-5405-3 DU	LT-R-001-GW	86.2	_____
160-5405-4	LT-R-002-GW	67.0	_____
160-5405-5	FB014	82.8	_____
160-5405-6	FB015	81.8	_____
160-5405-7	LT-R-003-GW	78.2	_____
LCS 160-104516/2-A	Lab Control Sample	81.8	_____
MB 160-104516/1-A	Method Blank	84.3	_____

Tracer/Carrier Legend

U-232 = Uranium-232

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